Claim Listing

Claims 1-14 are pending. Claim 6 has been amended; claim 14 is new.

1. (Original) A system for controlling an electric motor, comprising:

an encoder;

a central processor in communication with said encoder;

a module processor in communication with said central processor; and

feedback circuitry in communication with said module processor.

2. (Original) A system as in claim 1, wherein said encoder is an electronic device that provides rotor and stator positional information to said central processor.

3. (Original) A system as in claim 1, further comprising a user interface in communication with said central processor, wherein said user interface enables a user to select preferred operational parameters for an electric motor.

4. (Original) A system as in claim 1, wherein said central processor receives rotor and stator positional information from said encoder and rpm values, and transmits differences in latency to said module processor.

5. (Original) A system as in claim 1, wherein said module processor receives data from said central processor and, based on said data, controls one or more coils of an electric motor.

6. (Currently amended) A system as in claim 1, wherein said feedback circuitry receives data comprising temperature and individual coil conditions and transmits it to said module processor.

7. (Original) A system as in claim 1, wherein said central processor comprises a field programmable gate array.

8. (Original) A system as in claim 1, further comprising one or more H-bridge circuits in communication with said feedback circuitry.

9. (Original) A method for controlling an electric motor, comprising:

determining rotor position based on data received from an encoder;

determining how to energize stator coils;

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directing a power module to provide appropriate current to appropriate coils; and

monitoring rotor response.

10. (Original) A method as in claim 9, wherein said step of determining how to energize stator coils comprises consulting a look-up table.

11. (Original) A method as in claim 9, wherein said step of determining how to energize stator coils comprises determining which coils to energize.

12. (Original) A method as in claim 9, wherein said step of determining how to energize stator coils comprises determining which coils to energize at what times.

13. (Original) A method as in claim 9, wherein said step of determining how to energize stator coils comprises determining which coils to energize with how much power.

14. (New) A system as in claim 1, wherein said feedback circuitry receives data comprising temperature and coil conditions and transmits it to said module processor, said coil conditions comprising at least one of: coil position, coil angular velocity, and coil state.